Paragraph at Page 22, line 24: Sequencing: ABI PRISM™red. protokoll/AmpliTaq®FS ¼ BIGDYE TERMINATOR

C1

Paragraph at Page 24, lines 14-19: Place transfer solution (approx. 1 l 10x SSC) into upper reservoir; transfer time: 90 minutes; switch off vacuum, remove nylon membrane and rinse for 5 minutes in 2x SSC, then leave to dry in the air between filter paper. DNA immobilization: place nylon membrane on UV-permeable cling-film and apply probe at the edge as positive control; place into the STRATALINKER® UV CROSSLINKER and start crosslinking (1200000 J → 0); membrane may be stored in cling-film or between Whatman filter paper at room temperature or 4°C.

C2

In the Claims:

Please amend the claims to read, as follows:

1. (Amended) A process for identifying inhibitors of a eukaryotic potassium channel, in which
   a) a mutated S. cerevisiae cell is used which does not express the three endogenous potassium channels TRK1, TRK2 and TOK1;
   b) a eukaryotic potassium channel is expressed heterologously in this mutated S. cerevisiae cell;
   c) the mutated S. cerevisiae cell is incubated together with a substance to be tested; and
   d) the effect of the substance to be tested on the eukaryotic potassium channel is determined

   wherein a decrease in the transport of potassium across the eukaryotic potassium channel indicates that the substance is an inhibitor of the eukaryotic potassium channel.

C3

3. (Amended) The process as claimed in claim 1, wherein the eukaryotic potassium channel is a human potassium channel.

C4

4. (Amended) The process as claimed in claim 3, wherein the eukaryotic potassium channel is a HERG1, Kv1.5 or gpIRK1.

5. (Amended) The process as claimed in claim 4, wherein the eukaryotic potassium channel is mutated.

6. (Amended) The process as claimed in claim 5, wherein the eukaryotic potassium channel is present in a yeast expression plasmid.

C4 cont

7. (Amended) The process as claimed in claim 6, wherein the mutated S. cerevisiae cell expresses constitutively a growth reporter.

8. (Amended) The process as claimed in claim 7, wherein a substance to be tested, which has an effect on the eukaryotic potassium channel, inhibits the growth of the mutated S. cerevisiae cell.

9. (Amended) The process as claimed in claim 7, wherein the effect of a substance to be tested on the eukaryotic potassium channel is determined by measuring the cell count of the mutated S. cerevisiae cells.

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19. (Amended) The use of a mutated S. cerevisiae cell as claimed in claim 17 for identifying substances which inhibit the activity of the eukaryotic potassium channel.

C5

20. (Amended) A process of identifying activators of a eukaryotic potassium channel, in which

a) a mutated S. cerevisiae cell is used which does not express the three endogenous potassium channels TRK1, TRK2 and TOK1;

b) a eukaryotic potassium channel is expressed heterologously in this mutated S. cerevisiae cell;

c) the mutated S. cerevisiae cell is incubated together with a substance to be tested; and

d) the effect of the substance to be tested on the eukaryotic potassium channel is determined

wherein an increase in the transport of potassium across the eukaryotic potassium channel indicates that the substance is an activator of the eukaryotic potassium channel.

21. (Amended) A process of identifying activators of a eukaryotic potassium channel, in which

a) a mutated S. cerevisiae cell is used which does not express the three endogenous potassium channels TRK1, TRK2 and TOK1;

b) a eukaryotic potassium channel is expressed heterologously in this mutated S. cerevisiae cell;

c) the mutated S. cerevisiae cell is incubated together with a substance to be tested in the presence of an inhibitor of the eukaryotic potassium channel; and

d) the effect of the substance to be tested on the eukaryotic potassium channel is determined

wherein an increase in the transport of potassium across the eukaryotic potassium channel indicates that the substance is an activator of the eukaryotic potassium channel.